

⑫ SC 17/06/11

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Work Order ID 162578

Monday, June 05, 2017 9:32:55 AM

162578

Page 2

Item ID: D3589-13 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Lug
Start Date: 6/13/2017 Start Qty: 12.00 ***12*** Cust Item ID:
Required Date: 6/22/2017 Req'd Qty: 12.00 ***12*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.24				12			DAS 38 9-89 JUN 12 2017
140 *140* Packaging Packaging	Identify as per dwg & Stock Location: _____ Memo LOCATION: WA002	0.00 0.12				B			JUN 14 2017 DAS 6 9-89
150 *150* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 1.20							17/6/13 DAS 21 9-89 JUN 12 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Monday, June 05, 2017 9:32:54 AM

Page 1

Work Order ID: 162578

162578

Parent Item: D3589-13

D3589-13

Parent Item Name: Lug

Start Date: 6/13/2017

Required Date: 6/22/2017

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A 08-05-30 new issue DD verified by:ec
09-02-20 rev.b asper dwg DD verified by:EC IPP Rev:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA		Purchased	No			100	sf	78.7620	0.01	0.126316	14 9-89		

M304S16GA

304/316 Sheet .063

**

5c 17/06/11

Location

Loc Qty

Loc Code

MAT010

78.762

m136896

0.3

m137110

0.532

m137175

1.1

m137263

0.27

m137341

5.7

m137400

70.86

0.13

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																						
Large Fab ☐	Composite ☐	Supplier ☐																																																																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																																		
Description Work Order Deviation				Disposition				Completed By																																																																	
Root Cause				FAULT CATEGORY																																																																					
<table style="width:100%; border: none;"> <tr> <td style="border: none;">Environment ☐</td> <td style="border: none;">☐ No Re-verification</td> </tr> <tr> <td style="border: none;">Design ☐</td> <td style="border: none;">☐ Operator</td> </tr> <tr> <td style="border: none;">Doc/Data ☐</td> <td style="border: none;">☐ Offset/Setup</td> </tr> <tr> <td style="border: none;">Equip/Tooling ☐</td> <td style="border: none;">☐ Supplier</td> </tr> <tr> <td style="border: none;">Handling/Pre ☐</td> <td style="border: none;">☐ Training</td> </tr> <tr> <td style="border: none;">Material ☐</td> <td style="border: none;">☐ Use for Testing</td> </tr> <tr> <td style="border: none;">Internal Transport ☐</td> <td style="border: none;">☐ Poor Information</td> </tr> <tr> <td style="border: none;">Tribal Knowledge ☐</td> <td style="border: none;">☐ Rushing</td> </tr> <tr> <td style="border: none;">LOA ☐</td> <td style="border: none;">☐ Product Improvement</td> </tr> <tr> <td style="border: none;">Substation ☐</td> <td style="border: none;">☐ Process Improvement</td> </tr> <tr> <td style="border: none;">Past Expiry Date ☐</td> <td style="border: none;">☐ Manufacturing Process</td> </tr> <tr> <td style="border: none;">Misidentified ☐</td> <td style="border: none;">☐ Past Due</td> </tr> </table>				Environment ☐	☐ No Re-verification	Design ☐	☐ Operator	Doc/Data ☐	☐ Offset/Setup	Equip/Tooling ☐	☐ Supplier	Handling/Pre ☐	☐ Training	Material ☐	☐ Use for Testing	Internal Transport ☐	☐ Poor Information	Tribal Knowledge ☐	☐ Rushing	LOA ☐	☐ Product Improvement	Substation ☐	☐ Process Improvement	Past Expiry Date ☐	☐ Manufacturing Process	Misidentified ☐	☐ Past Due	<table style="width:100%; border: none;"> <tr> <td style="border: none;">☐ Pressure/Forced</td> <td style="border: none;">☐ Temperature/Cure</td> <td style="border: none;">☐ Power Loss/Surge</td> <td style="border: none;">☐ Positioned Wrong</td> </tr> <tr> <td style="border: none;">☐ Bending</td> <td style="border: none;">☐ Set-up</td> <td style="border: none;">☐ Folio/Program</td> <td style="border: none;">☐ Outside Dimensions</td> </tr> <tr> <td style="border: none;">☐ Centre Not Concentric</td> <td style="border: none;">☐ BOM/Route</td> <td style="border: none;">☐ Grain</td> <td style="border: none;">☐ Over/Under tolerance</td> </tr> <tr> <td style="border: none;">☐ Cracks</td> <td style="border: none;">☐ Broken/Damage/Defect</td> <td style="border: none;">☐ Weld</td> <td style="border: none;">☐ Part Incorrect</td> </tr> <tr> <td style="border: none;">☐ Crimp/Kink/Ripple/Wave</td> <td style="border: none;">☐ Inspection Incomplete/Unqualified</td> <td style="border: none;">☐ Wrong Stock Pulled</td> <td style="border: none;">☐ Part Lost/Missing</td> </tr> <tr> <td style="border: none;">☐ Cuffs</td> <td style="border: none;">☐ Contamination</td> <td style="border: none;">☐ Out of Sequence</td> <td style="border: none;">☐ Part Moved</td> </tr> <tr> <td style="border: none;">☐ Crushing</td> <td style="border: none;">☐ Countersink</td> <td style="border: none;">☐ Off-set</td> <td style="border: none;">☐ Drawing</td> </tr> <tr> <td style="border: none;">☐ Heat Treat</td> <td style="border: none;">☐ Cut Too Short</td> <td style="border: none;">☐ Mislabeled</td> <td style="border: none;">☐ Finish</td> </tr> <tr> <td style="border: none;">☐ Wave/Twist in Tube</td> <td style="border: none;">☐ Instructions Incomplete/Unclear</td> <td style="border: none;">☐ Fit/Function</td> <td style="border: none;">☐ Misread</td> </tr> <tr> <td style="border: none;">☐ Marks/Chatter</td> <td style="border: none;">☐ Drill Holes</td> <td style="border: none;">☐ Misaligned/off center</td> <td style="border: none;">☐ Turning Sequence</td> </tr> </table>						☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence
Environment ☐	☐ No Re-verification																																																																								
Design ☐	☐ Operator																																																																								
Doc/Data ☐	☐ Offset/Setup																																																																								
Equip/Tooling ☐	☐ Supplier																																																																								
Handling/Pre ☐	☐ Training																																																																								
Material ☐	☐ Use for Testing																																																																								
Internal Transport ☐	☐ Poor Information																																																																								
Tribal Knowledge ☐	☐ Rushing																																																																								
LOA ☐	☐ Product Improvement																																																																								
Substation ☐	☐ Process Improvement																																																																								
Past Expiry Date ☐	☐ Manufacturing Process																																																																								
Misidentified ☐	☐ Past Due																																																																								
☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong																																																																						
☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions																																																																						
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance																																																																						
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect																																																																						
☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing																																																																						
☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved																																																																						
☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing																																																																						
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish																																																																						
☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread																																																																						
☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence																																																																						
OTHER :																																																																									

DQA: _____ Date: _____

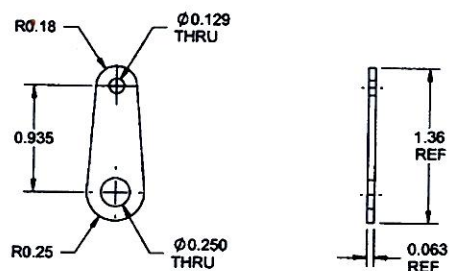


WORK ORDER NON-CONFORMANCE / UPDATE

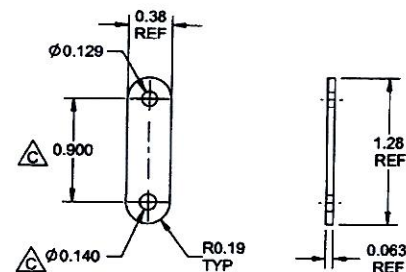
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																



D3589-13 LUG



D3589-15 LINK

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 162578 MJS
170607

RELEASED
2012-07-16
MD

D3589-13/-15 NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, PER AMS 5513 OR AMS 5524, OR MIL-S-5059 (ANNEALED) 2B FINISH
16 GAUGE (0.063 THICK), (REF. DART SPEC M304S16GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.01 lbs EACH

DESIGN			DART AEROSPACE LTD	
DRAWN			HAWKESBURY, ONTARIO, CANADA	
CHECKED			DRAWING NO.	REV. C
MFG. APPR.			D3589	SHEET 7 OF 8
APPROVED			TITLE	SCALE
DE APPR.			LATCH ASSEMBLY	NTS
DATE	12.07.04	COPYRIGHT © 2008 BY DART AEROSPACE LTD		
THIS DOCUMENT IS UNCLASSIFIED AND IS RELEASED BY THE EXPRESS OR IMPLIED AUTHORITY OF THE DART AEROSPACE LTD. IT IS NOT TO BE USED FOR ANY PURPOSE OR ON ANY OR COMMERCE TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.				

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Misabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER :							
Misidentified ☐	☐ Past Due								